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PROVISIONAL SPECIFICATION.

An Improved Antiseptic Disinfecting and Deodorizing Compound.

I, Jean Marie Raymond of 77 Avenue de Clichy, Paris, France, Chemist do hereby declare the nature of this invention to be as follows :—

This invention relates to an antiseptic disinfecting and deodorizing compound for the disinfection in general of animal and vegetable matter in a state of putrefaction, and also for the preservation of animal blood in an inodorous condition and its disinfection after putrefaction has commenced.

A comparative study of the various disinfectants heretofore employed has demonstrated that the chlorides of zinc or of lime, the sulphates of iron, of zinc, or of copper, phenol, thymol, cresyl, &c., effect only a partial and therefore inefficient disinfection. After analysis of the various gases evolved by decomposed matter which with the bacteria they convey give rise to contagious diseases, it has been sought to discover the particular antiseptic products which possess the greatest degree of efficiency for the fixation of these mephitic gases and the suppression of their noxious action, and to so combine or group these products that they should not mutually impede or destroy each others action.

This invention consists essentially in the association with a solution of zinc sulphate of various antiseptic products producing the effects above mentioned, such as zinc acetate, boric acid, aluminium sulphate and acetate, sodium hyposulphite, mercuric iodide, and acetic acid. The number and proportions of the ingredients to be combined may be varied according to the particular purpose for which the disinfectant is to be employed, but I will indicate merely as examples two formulas which have been found to give the best results for the purposes mentioned.

I. Disinfectant for General Application.

Water - - -	1000	parts	by weight
Zinc sulphate - -	300 to 500	„	„
Sodium hyposulphite -	30 to 50	„	„
Aluminium sulphate -	30 to 45	„	„
Boric acid - -	4 to 7	„	„
Zinc acetate - -	10 to 30	„	„
Mercuric iodide - -	0·10 to 0·25	„	„

The last mentioned ingredient being added only when a very powerful disinfecting action is required. The action of this composition is very efficacious for the disinfection of water closets, privies, urinals, soil and drain pipes, sinks, stables, kennels, courtyards, sick chambers, foul linen, &c.

II. Disinfectant for Animal Blood.

Water - - - - -	1000	parts
Acetic acid - - -	15 to 30	„
Aluminium acetate - -	50 to 100	„
Zinc acetate - - -	20 to 35	„
Boric acid - - -	4 to 7	„
Zinc sulphate - - -	150 to 250	„
Aluminium sulphate - -	2 to 5	„

[*Price* 8*d*.]

This composition is chiefly intended for use in slaughter houses where the blood shed is liable to decompose and give rise to infection, but in certain cases the sulphates of zinc and aluminium may be omitted.

Both of these compositions have given excellent results, the deodorization and disinfection being complete, no ferment remaining in existence after their use.

Dated this 15th day of June 1892.

J. M. RAYMOND,

By A. M. & Wm. Clark,
53, Chancery Lane, London, Chartered Patent Agents.

COMPLETE SPECIFICATION.

An Improved Antiseptic Disinfecting and Deodorizing Compound.

I, JEAN MARIE RAYMOND of 77, Avenue de Clichy, Paris, France, Chemist, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to an antiseptic disinfecting and deodorizing compound which may be used in the form of a powder, soap, or liquid, for the disinfection and deodorization in general of animal and vegetable matters in a state of putrefaction.

This compound may be employed—

(1) For effecting the permanent deodorization and disinfection of urinals, water-closets, sick rooms, and other places whether public or private, for receiving or conveying away evacuations of all kinds whether solid or liquid;

(2) For preserving skins or hides and preventing their putrefaction whereby they are rendered capable of being transported in a sound condition;

(3) For disinfecting clothing and linen fouled by persons suffering from contagious diseases as well as for purifying infected dwellings.

This improved product possesses the following advantages as compared with the various disinfectants heretofore employed such as metallic sulphates and chlorides, phenol, volatile and heavy oils, thymol, turpentine, cresyl, naphthol, *etc.*,—

(1) It deodorizes instantly without leaving any smell;

(2) It completely disinfects places or matters by destroying bacterial germs of fermentation;

(3) It destroys in a few minutes the bacilli of epidemic and contagious diseases, such as diphtheria, typhoid, anthrax, cholera, *etc.*

(4) It injures neither stone, wood, metals, linen, nor fabrics.

To obtain the whole of these results combined has necessitated a prolonged study of the various products suitable for use as deodorants and disinfectants, with a view to select and group together such of them as would not be liable to mutually impede or destroy each other's action, in order to obtain the highest maximum of efficiency possible in the composition of a complex and at same time special product.

The invention consists essentially in the association with zinc sulphate of various other deodorizing or antiseptic agents, each having its own special action, so as to obtain by their conjoint operation a product of assured efficiency. These agents are alum, aluminium sulphate, boracic acid, magnesium sulphate, sodium sulphite and hyposulphite, calcium sulphate, and potassio-mercuric-iodide this latter product being added only when it is desired to overcome very strong infection and to disinfect the rooms, evacuations, linen, and bedding, of persons suffering from contagious diseases.

The number and proportions of the ingredients to be combined may be varied according to the particular purpose for which the disinfectant is to be employed, but I will indicate, merely as examples, four formulas which have been found to give the best results for the purposes mentioned.

I. Powder for Preserving Skins.

Zinc sulphate	30 to 42 grammes
Alum	12 „ 18 „
Boracic acid	3 „ 4 „
Magnesium sulphate	25 „ 36 „

II.–Compressed Soap for the Permanent Deodorization of Urinals.

Zinc sulphate (dried)	60 to 90 grammes
Aluminium sulphate	12 „ 15 „
Alum	5 „ 10 „
Boracic acid	3 „ 5 „
Calcium sulphate	20 „ 30 „

III. Liquid Disinfectant for General Application.

Water	1000 grammes
Alum	15 to 25 „
Aluminium sulphate	25 „ 50 „
Sodium hyposulphite	20 „ 40 „
Sodium sulphate	30 „ 50 „
Boracic acid	5 „ 8 „
Zinc sulphate	250 „ 350 „
Potassio-mercuric-iodide	4 „ 10 „

IV. Disinfectant for Animal Blood.

Water	1000 grammes
Acetic acid	15 to 30 „
Aluminium acetate	50 „ 100 „
Zinc acetate	20 „ 35 „
Boracic acid	4 „ 7 „
Zinc sulphate	150 „ 250 „
Aluminium sulphate	2 „ 5 „

This composition is chiefly intended for use in slaughterhouses where the blood shed is liable to decompose and give rise to infection, but in certain cases the sulphates of zinc and aluminium may be omitted.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, I declare that what I claim is—

The herein described deodorizing and disinfecting compounds for use either in the form of a powder, soap, or liquid, consisting essentially in the combination, with zinc sulphate, of the various other ingredients hereinbefore specified, in number and proportion dependent on the purpose to which the composition is to be applied, substantially as described.

Dated this 21st day of February 1893.

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